Ground Water Management and Protection

Because of the high sensitivity of Long Island's ground water resources to all sources of contamination and the critical need for a continuous supply of high-quality ground water, many significant management and protective programs have been initiated over the past 20 years or so. These programs consist of several components involving local, regional, state, and federal agencies and organizations.

The Long Island aquifer system was one of the first to be designated a "sole source aquifer" in 1978 by EPA under provisions of the Safe Drinking Water Act. This designation, together with state regulations and policies, has provided the foundation for the development and implementation of a complex, comprehensive, integrated regional ground water management and protection program for Long Island.

The Long Island program includes elements covering the following general areas of program activity:

- Resource management—ambient water quality standards; aquifer classification system; monitoring program planning, review, and management.
- Source controls—hazardous material storage and handling; industrial/commercial/municipal waste management; sewage treatment; pesticide/fertilizer controls; underground storage tank restrictions.
- Zoning and land use controls.
- Water supply management—well permits, driller registration, public water supply.
- Drinking water—water quality guidelines for synthetic organic chemicals.
- Response and remedial actions—contamination response and Super-fund programs; contaminated aquifer management; water treatment at well head; sewering to replace septic systems; regional water distribution and importation.
- Public education and participation.
- Regulatory enforcement.

Although more than 20 federal, state, regional, county, and local agencies and organizations are involved in carrying out this program, the leading regulatory roles are played by EPA at the federal level, the Department of Environmental Conservation and the Department of Health at the state level, and, at the county level, the Nassau and Suffolk County Health departments and the New York City Health Department.

A key element of the island's ground water protection program is the designation of extensive "hydrologic zones" that provide most of the deep

